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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,953	03/30/2001	Kenneth William Willman	7973MR	3897

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THE PROCTER & GAMBLE COMPANY
INTELLECTUAL PROPERTY DIVISION
WINTON HILL BUSINESS CENTER - BOX 161
6110 CENTER HILL AVENUE
CINCINNATI, OH 45224

EXAMINER	
DAVIS, JENNA L	
ART UNIT	**PAPER NUMBER**
1771	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,953	WILLMAN ET AL.	
	Examiner	Art Unit	
	Jenna Davis	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/24/2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-42,65-70,74-83,85-94 and 97-111* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-42, 65-70, 74-83, 85-94, and 97-111* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 87 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 87 recites the substrate "comprises at least one layer of a nonwoven material." This limitation is already accounted for in parent claim 90.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 38-42, 65-70, 74-83 and 85-94, and 97-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lerner et al. (U.S. Patent No. 5,198,292) in view of Ngai (U.S. Patent No. 6,314,627) and Bhattacharjee (US 5227844).

With regard to claim 90, Lerner et al. disclose a cleaning cloth comprising pressure sensitive adhesive and tackifier (Abstract). Lerner et al. disclose using a hydroentangled web as

the substrate (column 5, lines 55-66), but do not disclose hydroentangling to provide a macroscopically three-dimensional substrate. Ngai also teaches a hydroentangled nonwoven fabric that is efficient for wiping solid matter (Abstract). Ngai discloses that a three dimensional quality is provided to the fabric in the form of ridges, bumps, or other geometric configurations that are discernable to the human eye in order to provide a fabric that is far more efficient at collecting solid than a flat fabric (column 2, lines 30-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to provide a three dimensional texture to the fabric of Lerner et al. in order to improve the ability of the tack cloth of Lerner et al. to retain solid particles, as taught by Ngai. With regard to the substrate being non-apertured limitation, the substrate of Ngai meets this claim limitation because Ngai teaches the "structured surface" may be in the form of a three dimensional surface or a pattern of apertures (column 2, lines 30-32). Ngai does not require apertures, and also teaches that they are not desirable when an impervious fabric is desired (column 1, lines 36-40). With regard to the amount of polymeric additive incorporated into the substrate, Ngai teaches that the three layer substrate will weigh between 30 and 120 grams per square meter (see column 4, line 55; column 5, lines 31-32; and column 8, lines 31-34). Lerner et al. disclose the amount of polymer material, based on the dry fabric weight, may vary between 3 and 50% depending on the desired end use (column 8, lines 19- 23). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use between 0.1 and 10 gsm of polymeric additive, since the percentages provided by Lerner et al. would embrace that range. Also, the amount of polymeric additive used would be a result effective variable depending on the weight of the fabric, and whether a low-activity tack cloth or high-activity tack cloth were desired for the end product (see Lerner et al., column 8,

lines 19-23). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980). With regard to claims 91 and 92, similar reasoning applies to the smaller ranges of polymer additive recited in these claims. With regard to the Average Height Differential of least 0.2 mm for the peaks and valleys, Ngai discloses transferring a pattern from a forming support, and specifically recites U.S. Patent No. 5,098,764 to Drelich et al. for an example of usable forming supports (column 2, lines 41-48). Drelich et al. disclose the forming support to have a height differential from peak to valley of 0.229 cm (column 11, line 8). Since the material is molded to the same shape as the forming support, the average height differential of the Ngai substrate would be at least 0.2 mm. The average height differential would also be greater than 0.4 mm (claims 74 and 85), 0.6 mm (claims 75 and 86), 1.0 mm (claim 103), or any other value less than 2.3 cm (claim 104). With regard to claim 76, although Ngai does not disclose the shape of the raised regions, it would have been obvious to a person having ordinary skill in the art at the time of the invention to form the raised regions in the shape of a rounded parallelogram since selection of the shape is part of the process of selecting the design pattern of the nonwoven fabric. Selecting a desired pattern, absent any unexpected results, is an obvious modification to one having ordinary skill in the art. With regard to claims 77, 81, and 82, the recessed regions would form a continuous pattern using the forming supports disclosed in Drelich et al. With regard to claims 78 and 79, although neither Ngai nor Drelich et al. disclose channel width, it is reasonable to presume that the claimed width is inherent because the dimensional properties of the three-dimensional pattern of raised regions are similar. Alternatively, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have the

recessed pattern include a channel width between 1 and 8 mm in order to create sufficient space between raised regions so that the three-dimensional structure is properly allowed to trap solid particles, as taught by Ngai (column 2, lines 60-67). With regard to claims 80 and 83, Lerner et al. teach the entire fabric uniformly contains the polymeric additive (column 3, lines 6-9). With regard to claim 88, Lerner et al. disclose that the amount of tack allows for folding (column 6, line 45). Page 7 With regard to claim 89, Ngai teaches the three-dimensional structure traps solid material (column 2, lines 60-67). With regard to claims 93 and 94, Lerner et al. disclose using polyisobutylene (column 6, line 54).

With regard to claims 38, 95, 96, 98-100, 102, and 103, Lerner et al. do not teach a zone on the fabric that is free of the coating composition. Bhattacharjee et al. teach that sufficient cleaning is attained when a pattern of tacky adhesive is applied to a cleaning substrate rather than a continuous coating (column 4, lines 26-46). It would have been obvious to a person having ordinary skill in the art at the time of the invention to create the cleaning cloth with at least one zone not possessing the coating in order to save on the amount of coating used while still creating a substrate with sufficient cleaning ability, as taught by Bhattacharjee et al.

With regard to claims 97, 101,104-109 and 111, the limitations of these dependent claims are addressed above. With regard to claim 110, other layers of fabric are not precluded by the recitation that the cleaning sheet is made of a single layer.

Claims 38-42, 65-70,74-83, and 85-94 and 97-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strickland et al. (WO 98/52458) in view of Lerner et al and Bhattacharjee.

With regard to claims 38 and 90, Strickland et al. disclose a cleaning sheet having substantial macroscopic three-dimensionality (Abstract). Strickland et al. disclose the average height differential to be at least 0.5 mm, and can be as high as 6 mm (page 3). The cleaning sheet can be made from either a single fibrous layer or multiple fibrous layers (page 7). Apertures are not provided to the fabric. Strickland et al. encourage the use of additives to the cleaning sheet, especially those that improve adherence of soil to the sheet (page 9), but Strickland et al. do not disclose adding an adhesive or tacky polymer. Lerner et al. disclose that cleaning cloths can have improved particulate retention if treated with a composition comprising tackifier and adhesive (Abstract). Lerner et al. teach the amount of composition added onto a fabric can be between 3% and 50% by weight depending on the desired activity of the cloth (column 8, lines 19-23). The amount of polymeric additive used would be a result effective variable depending on the weight of the fabric, and whether a low-activity tack cloth or high-activity tack cloth were desired for the end product. It would have been obvious to a person having ordinary skill in the art to add between 0.1 and 10.0 gsm of polymeric additive to the fabric of Strickland et al. in order to provide the cloth with the proper amount of tack for its intended use, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Similar reasoning applies to claims 39, 40, 91, and 92. With regard to claims 41,42, 93, and 94, Lerner et al. disclose using polyisobutylene (column 6, line 54). With regard to the fabric texture dimensions found in claims 65-70, 74, 75, 77-79, 81,82, 85, 86, and 89, Strickland et al. teach similar dimension (See page 8) are used in a continuous pattern of peaks and channels (See Figures 1-8). With regard to claim 76, the recessed regions can have a rounded parallelogram

configuration (See Figure 4). Page 9 With regard to claims 80 and 83, Lerner et al. teach the entire fabric may uniformly contain the polymeric additive (column 3, lines 6-9). With regard to claim 88, Lerner et al. disclose that the amount of tack allows for folding (column 6, line 45). 10. With regard to claims 95, 96, 98-100, 102, and 103, Strickland et al. teach that it may be preferable to provide lower levels of additive when using an additive that improves adherence of soil to the sheet (page 9). Strickland et al. disclose applying additive "to at least one discrete continuous area" (page 9, emphasis added). This teaching implies that more than one discrete area may be coated with additive. Bhattacharjee et al. teach that sufficient cleaning is attained when a pattern of tacky adhesive is applied to a cleaning substrate rather than a continuous coating (column 4, lines 26-46). It would have been obvious to a person having ordinary skill in the art at the time of the invention to create the cleaning cloth of Strickland et al. with at least one zone not possessing the coating in order to save on the amount of coating used while still creating a substrate with sufficient cleaning ability, as taught by Bhattacharjee et al. With regard to claims 97, 101, and 104-111, the limitations of these dependent claims are addressed above.

Double Patenting

The terminal disclaimer filed July 24, 2006, is sufficient to overcome the double patenting rejections.

Response to Arguments

Applicant's arguments filed July 24, 2006, have been fully considered but they are not persuasive. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Examiner maintains that a person having ordinary skill in the art would have appreciated that less than a continuous coating of adhesive additive would have made production of cleaning materials of the type claimed less expensive to produce while maintaining the intended and desired function as disclosed in Bhattacharjee.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna Davis whose telephone number is 571-272-3357. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1111. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jenna Davis
Primary Examiner
Art Unit 1771

Jld
571-272-3357